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## FIVE NEW RODENTS FROM THE EASTERN ELBURZ MOUNTAINS AND A NEW RACE OF HARE FROM TEHERAN

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The Legendre 1938 Iran Expedition brought back one of the most interesting collections of mammals to be received at the Museum in recent years. The collection not only included new races but genera and species not previously represented in any museum in America.

### *Glis glis petrucii*, new subspecies

Petrucchi Dormouse

TYPE.—No. 88759, Amer. Mus. Nat. Hist.; semi-adult ♂; Gouladah foothills of the Kurkhud Mountains, District Bujnurd, northeastern Iran; alt. about 3000 feet; collector, G. G. Goodwin, Nov. 4, 1938. The type is a skin and skull in good condition, upper molars slightly worn, premolar and third molars in place but unworn.

GENERAL CHARACTERS.—A comparatively small dormouse with short thick buffy gray pelage, and only a few scattered long black guard hairs; tail, bushy, much darker than back; under parts, white; skull, short and broad with high smooth braincase and relatively large molars.

DESCRIPTION.—Color above dark drab, darkest on middle of back and grading to a paler and more buffy shade on sides of body and rump, the dark drab extending down upperside of fore and hind limbs to metatarsals and metacarpals; basal color of hair dark neutral gray; area behind and below ear light buff, darkened by the basal color of hair; ears, dark mouse-gray, moderately covered with fine blackish hairs; head, slightly paler than back, grading to almost buffy white on nose; eye-ring and center line on tip of nose, blackish. Tail dark clove-brown for most of its length, becoming color of back at extreme base. Under parts, including inner side of fore and hind limbs, toes of fore and hind feet and a sharply defined line down underside of tail to tip, white to roots of hair; the white of under parts extending on cheeks to lower edge of eye ring.

SKULL.—Small, broad, with short rostrum; braincase deep and slightly elevated above rostrum; molariform teeth relatively large and broad.

MEASUREMENTS.—Skin measured in the flesh. Total length, 220 mm.; head and body, 120; tail, 100; hind foot including claws, 27. Skull: greatest length, 31.5; condylobasal length, 30;

zygomatic breadth, 19.6; interorbital constriction, 4.8; nasals, 10; diastema, 6.8; alveoli of maxillary tooththrow, 6.5.

REMARKS.—*Glis g. petrucii* is the smallest race of the genus *Glis* and apparently smaller than *Glis g. minutus* Martino from Yugoslavia, and *G. g. spoliatus* Thomas from Trebizond, Turkey. *G. g. caspicus* Satunin from Aschabad, Turkmania, the nearest geographical race, is about equal in size to typical European *Glis glis* according to Thomas and therefore larger than *petrucii*.

A series of 8 specimens from near Astrabad, eastern Mazandaran, may be referable to *caspicus*. They are considerably larger than *petrucii*. External and cranial measurements of very young animals are decidedly greater than in the new race though they are practically indistinguishable in color. Four flat skins without feet given to me by a fur dealer at Astrabad and said to have been taken locally are much larger than any of the Legendre Iran Expedition specimens. They have long coarse pelage and are about the color and size of a large European *Glis glis*. It is possible that these skins represent Satunin's *caspicus*. The type of *petrucii* was taken under some blackberry bushes in a valley of oak trees, surrounded by open rolling grassland country. Several days' trapping yielded no further specimens, which indicated that they had gone into hibernation.

I have named this new form in honor of His Excellency, L. Petrucci, Italian Minister to Iran, in appreciation of his splendid coöperation and interest in the wild life of Iran.

### *Calomyscus elburzensis*, new species

Elburz Vesper Mouse

TYPE.—No. 88838, Amer. Mus. Nat. Hist.; adult ♀, Degermatie, Kurkhud Mountains, dis-

trict of Bujnurd, Iran; alt. 4000 feet; collector, G. G. Goodwin, Nov. 14, 1938. The type is a skin and skull in good condition. Besides the type there are 4 topotypes.

**GENERAL CHARACTERS.**—A rather small light-colored mouse with soft thick pelage; tail well haired, pencilled but not bushy terminally, about equal in length to head and body; ears rather small for the genus; very similar in cranial and external characters to North American *Peromyscus*.

**DESCRIPTION.**—Color above pinkish buff, heavily overlaid with blackish mouse-gray. The hairs plumbeous black at base, followed by a broad band of pinkish buff and tipped with black mouse-gray; an ill-defined lateral line, clear pinkish buff, slightly richer in color than back; front of face light buff, the dark tips of hairs inconspicuous. Under parts, including fore and hind feet and well up on sides of face and nose, pure white to base of hairs; ears, dark brown, sparsely covered with short fine dusky hairs; tail, above, clove-brown to tip; below, white.

**SKULL.**—Low and flat; braincase rounded; rostrum long and slender; bullae small; zygomatic arches weak, narrower anteriorly than posteriorly; palatal foramina long and narrow, ending posteriorly about 8 mm. in front of a line across first molars; interparietal relatively short and broad; molariform teeth small, 5 low cusps on first molar normal for the genus.

**MEASUREMENTS.**—Skin measured in the field. Total length, 160 mm.; head and body, 80; tail, 80; hind foot including claws, 21; ear from notch in dried skin, 12.3. Skull: greatest length, 25; condylo-incisive length, 21.9; basal length, 20; palatal length, 11.6; length of nasals, 9.4; zygomatic breadth, 12.8; interorbital breadth, 4.1; breadth of braincase, 11.5; alveoli of upper molar series, 3.3; palatine foramina, 4.4; interparietal,  $3 \times 9.3$ .

**REMARKS.**—*Calomyscus elburzensis* is a short-eared form readily distinguished from *C. bailwardi* Thomas (west central Iran) and *C. baluchi* Thomas (Kelat, Baluchistan) by its small size, much smaller ears and distinctive cranial characters. It is similar in general structure to *C. hotsoni* Thomas (Gwanbuk Kawl, sw. of Panigur Baluchistan) but differs from the latter in its larger size, relatively shorter tail, smaller ears, shorter palatine foramina, wider interparietal region and paler color. The type of *C. mystax* Kashkarov came from the Great Balkan Mountains, Transcaspia. Kashkarov's description is brief, external measurements are not given, only three cranial measurements; color is described as avellaneous, not much shaded with black. Besides the color differences the Great Balkan Mountains race has molar teeth

3.4–3.6, as compared with 3.2–3.4 in the *elburzensis*, and a longer and narrower interparietal,  $3.6 \times 8.3$  as compared with  $3 \times 9.3$  in the present species. *C. elburzensis* is probably closely allied to either *C. hotsoni* or *C. mystax*. A comparison of specimens of the three species may show that either *elburzensis* or *mystax* or both are subspecies of *hotsoni*.

The present series were trapped on a bleak, barren rocky mountain ridge. None was taken in more sheltered areas fifty feet lower where vegetation was plentiful. The five specimens are all adults and in early winter pelage. When taken, the first snow had already fallen and temperature at night dropped below freezing point.

### **Meriones (Parameriones) persicus gurganensis, new subspecies**

#### **Gurgan Gerbil**

**TYPE.**—No. 88881, Amer. Mus. Nat. Hist.; adult ♂; Dasht, headwaters of the Gurgan River and south side of the Gurgan Valley, Bujnurd district; alt. about 3200 feet; collector, G. G. Goodwin, Nov. 24, 1938. The type is a skin and skull in good condition. Besides the type there are three topotypes and one specimen from the Kurkhud Mountains, 4000 feet on the opposite side of the Gurgan Valley.

**GENERAL CHARACTERS.**—A medium-sized, buff-colored gerbil with soft pelage and white under parts; tail, longer than head and body; buffy below with a brush of long dusky hairs from tip to about half its length; underside of feet entirely naked; smaller and with larger bullae than typical *M. persicus* Blanford from Southern Persia; about the size of *Tatera suschkini* Kashkarov, from the Great Balkan Mountains, Transcaspia, but differing in color and cranial characters. Kashkarov's *T. suschkini* is apparently a race of the bushy tailed *Meriones persicus* group and not *Tatera persica*.

**DESCRIPTION.**—Color above pinkish buff overlaid with black-tipped hairs, darkest on rump and top of head, base of hairs deep neutral gray; ears, clay-color; an indistinct buffy white mark above and behind the eye and behind the base of ear; upperside of tail from base for about half its length like back, distal half the hairs longer and blackish, pencil hairs from base soiled whitish and tipped with neutral gray; underside of tail, cinnamon-buff, irregularly marked with white. Under parts, including underside of fore and hind limbs, lips, and well up on side of face and body, upperside of fore and hind feet, white to roots of hair.

**SKULL.**—Long and narrow; rostrum slender; nasals, long and narrow; bullae, large, extending posteriorly beyond the occipital condyles;

coronoid process extending rather abruptly upward above the upper edge of the mandible.

MEASUREMENTS.—Skin measured in the field. Total length, 325 mm.; head and body, 150; tail vertebrae, 175; hind foot including claws, 43. Skull: greatest length, 42.3; condylobasal length, 37.5; zygomatic width, 21.5; interorbital constriction, 6.7; length of nasals, 17.5; alveoli of maxillary tooththrow, 6.1; diastema, 10.8; anterior palatine foramina, 7.8; tympanic mastoid bullae,  $15.3 \times 10$ ; mandibular tooththrow, 5.7.

REMARKS.—*Meriones p. gurganensis* needs comparison with only two described forms: from typical *persicus*, it is readily distinguishable by its smaller size, paler color and larger bullae; from *suschkini*, by its longer nasals, 17.5 as compared with 14.6, longer tooththrow, 6.1 with 5.7, larger skull, 42.1 with 40.6, larger tympanic bullae, 13.2 with 12. *Suschkini* is described as gray in color and underside of tail white, whereas the Gurgan specimens are buffy in color and, while they all have more or less white on the underside of the tail, the general tone in adult specimens is cinnamon-buff. The new form is geographically separated from *suschkini* by the low Turkman plains and from *persicus* by the central Persian plains. *Meriones ambrosus* Thomas from the Bachtari Mountains is a larger and more richly colored race than *gurganensis* with smaller bullae.

### *Meriones (Pallasiomys) iranensis*, new species

Iran Gerbil

TYPE.—No. 88888, Amer. Mus. Nat. Hist.; adult ♂; Dasht, a small village on the headwaters of the Gurgan River, on the south side of the Gurgan Valley; alt. about 3200 feet; collector, G. G. Goodwin, Nov. 23, 1938. The type is a skin in fair condition and skull in good condition. Besides the type there is an adult female specimen in spirits with damaged skull from Maravih, Incha district, north of the Gurgan gorge.

GENERAL CHARACTERS.—A medium-sized, slender gerbil with fine, dense, grayish pelage; proximal median area of soles of hind feet naked, sides and terminal half, haired; under parts white with basal portion of hairs dusky; ears, small. Skull, superficially similar to *M. erythrourus* Gray but smaller, with more inflated bullae and larger teeth.

DESCRIPTION.—Color above pinkish buff, grading to light buff on sides of head and body, overlaid with black-tipped hairs, base of hair

deep neutral gray; ears, pinkish buff; postauricular patch, light buff; upperside of tail, cinnamon-buff mixed with black. In the type the hair on the terminal third of the tail is badly worn but in the Maravih specimen the dark hairs on the distal third graduate longer to a black bush pencil; underside of tail, clear cinnamon-buff to tip; fore and hind feet, white, faintly washed with light buff. Under parts white, base of hairs deep neutral gray except on chin and throat where the hairs are white to roots.

SKULL.—Normal for the *Pallasiomys* group; smaller than typical *M. erythrourus* with bullae relatively more swollen, rostrum longer, palatal foramina shorter, ending slightly in front of a line across anterior face of first molars, molariform teeth larger and last molar without indication of a rudimentary transverse ridge. Supra-meatal-triangle long and narrow.

MEASUREMENTS.—Dried skin; specimen in spirits in parentheses. Total length, 300 mm. (260); tail vertebrae, 128 (130); hind foot including claws, 35 (33); ear from notch, 14.5 (15.5). Skull: greatest length, 40.5 (40); condylo-incisive length, 36.9; interorbital constriction, 6.6 (6.5); zygomatic breadth, 22; length of nasals, 15.1 (15); alveoli of upper molar series, 6.2 (5.8); palatal foramina, 6.7; bullae, length 16 (15), breadth 10.5 (10.5), posterior border to front of meatus, 13.2 (13.1); supra-meatal-triangle, length 5 (4.8), breadth 2.3 (2.2).

REMARKS.—*M. iranensis* may be distinguished from other described races by the combination of rather small size, soft grayish pelage, partially naked soles, slender feet, white under parts, hairs grayish at base, normal inflation of bullae and narrow supra-meatal-triangle. It is smaller, more slender and grayer in color than a specimen of *M. erythrourus* from the same locality. *M. syrius* is a larger and more robust race, inhabiting the Syrian and Arabian desert areas; *M. vinogradovi* from Aserbeidschan, Persia, about equals *iranensis* in size and color but in this species the soles of the feet are completely haired. *M. charon* from the Karun Desert region, Persia, is a smaller race related to *M. longifrons* and needs no comparison with the present species. *M. e. maxeratis* Heptner from the Chandyr River, Kopet Dag Transcaspian, is a small race of the *erythrourus* group, smaller than *M. iranensis*, with a shorter foot, smaller skull and less inflated bullae.

The Iran gerbil is an inhabitant of the high plateau desert country of northeastern Iran. It is probably diurnal and not particularly abundant.

**Rhombomys opimus sodalis**, new  
subspecies

Elburz Giant Gerbil

TYPE.—No. 88867, Amer. Mus. Nat. Hist.; adult ♂; Maravih, Incha district; alt. about 2000 feet; collector, G. G. Goodwin, Nov. 15, 1938. The type is a skin and skull in good condition. Besides the type there are 22 topotypes including 12 specimens in spirits and 6 specimens from Dasht, alt. 3200 feet, on the headwaters of the Gorgan River.

GENERAL CHARACTERS.—A pinkish cinnamon gerbil about the size of *R. opimus* from the sandy wastes on the northeast shore of the Aral Sea but differing in coloration.

DESCRIPTION.—Color above in general tone pinkish cinnamon, overlaid with black; the hairs dark neutral gray at base followed by a broad band of light ochraceous buff and tipped with black, darkest on crown of head and rump; sides of body, light buff; upperside of fore and hind feet, ring around eye, and ears, light buff; tail, uniform cinnamon-buff with a crest of black hairs on distal half; under parts buffy white, the light buff of sides extending irregularly over much of under parts; base of hairs dark neutral gray. Skull, massive; front incisors with two grooves, characteristic of genus; similar to *R. opimus* but interparietal broader and molariform teeth larger.

MEASUREMENTS.—Type (skin measured in the flesh); topotypes (adult ♂ and adult ♀) in parentheses. Total length, 320 (354, 300); tail vertebrae, 140 (155, 135); hind foot including claws, 45 (44.6, 43).

SKULL.—Greatest length, 45.9 (44.6, 43); condylo-incisive length, 41 (40.4, 39.1); inter-orbital constriction, 8 (8, 7.6); zygomatic width, 25.8 (26.7, 25.8); length of nasals, 17.2 (16.7, 16.9); interparietal, length 5.4 (6, 5.1), width 7.9 (8.7, 9.4); bullae 16.3 (16, 15); alveoli of upper molar series, 7.5 (7.4, 7).

REMARKS.—All the known forms of *Rhombomys* are closely allied, showing little variation in cranial characters and having a wide range in Central Asia.

*R. o. sodalis* requires comparison only with *R. o. opimus* from the sandy wastes, northeast of the Aral Sea and *R. o. fumicolor* from the Syr-Daria, 35 miles northeast of Kokand. Both forms inhabit low desert areas whereas the new race was taken on the upland plateaus from 2000 to 3000 feet elevation in northeastern Iran where a new geographical race might be expected. Typical *R. opimus* averages smaller than *sodalis* and coloration more yellowish. *R. o. fumicolor* is larger than the Iran race and pelage dark grayish instead of pinkish cinnamon.

**Lepus europaeus iranensis**, new  
subspecies

Iran Plateau Hare

TYPE.—No. 88904, Amer. Mus. Nat. Hist.; adult ♂; Teheran, Iran; alt. about 3500 feet; collector, G. G. Goodwin, Dec. 6, 1938. The type is a skin and skull in good condition. Besides the type there is an adult topotype; both specimens were collected by local hunter in the vicinity of Teheran.

GENERAL CHARACTERS.—A relatively small pinkish buff hare with curly pelage; large ears and conspicuous black area on upperside of tail, characteristic of the *europaeus* group; hind feet, nearly white; black on front of ear restricted to a narrow margin on tip. Skull, short and broad with wide braincase and large bullae.

DESCRIPTION.—Color above, light ochraceous salmon; hairs white from base for about half their length, followed by broad bands of black and light ochraceous salmon, finely tipped with black; rump grayish, the hairs slaty gray at base; top of the head, like back; an indistinct buffy white ring around the eye and a buffy white patch behind the eye; front of ears, pinkish buff, margined with a narrow line of buffy white, margin around tip black, the black extending down back of ear about an inch, rest of back of ear white; sides of body, light ochraceous salmon; the hairs without black band, extreme base slaty gray; fore feet, ochraceous buff; hind feet, mostly buffy white. Underside of neck and area in inguinal region, light ochraceous salmon; rest of under parts, including innerside of limbs, white.

SKULL.—Short and broad, with wide braincase; broad short nasals; heavy zygoma; large inflated bullae; postorbital processes, broad and flaring; teeth, relatively broad.

MEASUREMENTS.—Type (skin measured in the flesh); topotype in parentheses. Total length, 600 (600); tail, 59 (58); hind foot including claws, 150 (145); ear, from notch in dried skin, 112 (108). Skull: greatest length, 96.3 (97); occipitonasal length, 93.5 (93.0); condylobasal length, 85.5 (85.5); zygomatic breadth, 46.2 (48); postorbital constriction, 13.3 (15.3); greatest breadth of nasals, 21.7 (22.7); length of nasal, 39.5 (40.4); breadth of braincase, 31.6 (35.2); diastema, 28.2 (28.2); depth bullae, 13.7 (12.1); width of palate between  $m^2$ - $m^3$ , 13.1 (12); alveoli of maxillary toothrow, 17 (17).

REMARKS.—*L. e. iranensis* may be readily distinguished from European races of this group by its smaller size, pinkish coloration, more buffy ears and lighter colored feet; in cranial characters by its shorter and broader skull, relatively broader nasals, wider braincase and more inflated bullae. It is also smaller than *L. e. cyrensis* from Transcaucasia, with narrower nasals, much shorter toothrow (crowns 15 mm. as com-

pared with 18) and shorter tail. It needs no comparison with *L. lehmanni*, from east of the Caspian, which is a small species intermediate between the *timidus* and *toli* groups. *L. e. turcomanus* from the Karakum Desert is a small dark-colored race, similar to *lehmanni*. *L. e. caspius* from

Astrakan is a more northern race and is separated geographically from the Iran hare. The description and colored plate of *L. syriacus* indicate a decided yellowish pelage, very different from that of *iranensis*; it is also smaller with less black on the tip of the ears than in the latter.

